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Effect of the
PILOT
FOOD STAMP
PROGRAM
on Retail
Food Store
Sales

^{5b}

Marketing Economics Division,
Economic Research Service,
U.S. Department of Agriculture,
Agricultural Economic Report No. 8)

PREFACE

A Food Stamp Program was initiated by the Department on a pilot basis in eight selected areas of the country in mid-1961 to help needy families in acquiring sufficient foods for more nearly adequate diets, and to assist in alleviating problems in our farm economy resulting from the current abundance of production. Under this program persons meeting stipulated eligibility requirements have their food purchasing power increased through allotments of food coupons which can be used to purchase foods in regular commercial outlets. In the pilot areas the Stamp Program replaced a program of direct donations of foods to needy families.

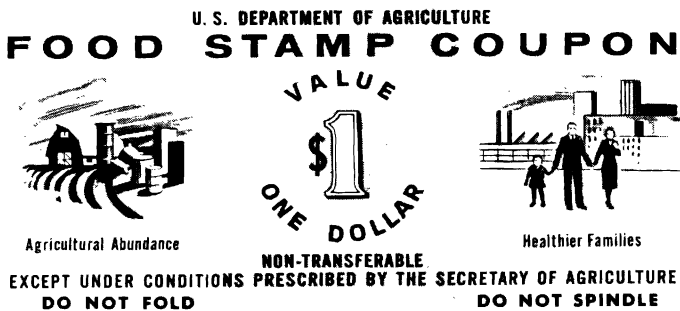
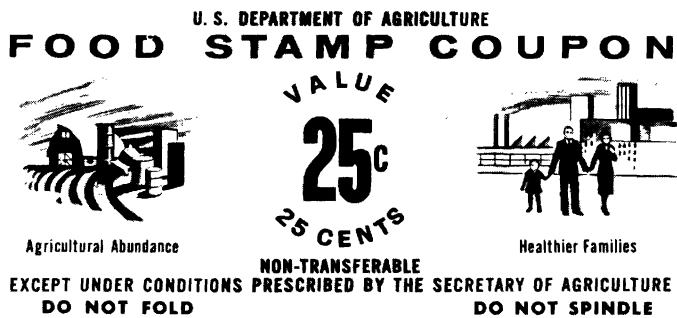
This report is part of an overall research effort to evaluate the effects of a pilot Food Stamp Program on food consumption, nutritional intake of participants, food retailing, and farm income. The research was undertaken by the Economic Research Service, the Agricultural Research Service, and the Statistical Reporting Service, all within the U. S. Department of Agriculture. The overall project was coordinated by Robert M. Walsh, Assistant to the Administrator of the Economic Research Service.

This report describes that part of the research dealing with the effect of the Food Stamp Program on sales of food in retail stores. Specifically, it records changes in total sales and sales of selected food groups. This part of the research was conducted in the Economic Research Service under the general supervision of William S. Hoofnagle and Peter L. Henderson. Hugh M. Smith served as assistant project director. Fieldwork in the pilot areas was directed by Nick Havas, Michael Van Dress, James Hannan, Robert Martin, Milton Anderson, Frank Sands, Hazen Gale, Carl Twining, and Cleveland Eley.

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April 1962//

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SUMMARY

Dollar sales of retail stores in the pilot Food Stamp Program were up 8 percent, after adjustment for seasonal variation, from sales reported prior to initiation of the Program, according to data from a representative sample of stores in areas of Detroit, Mich., and selected counties in Illinois, Kentucky, Minnesota, Montana, New Mexico, Pennsylvania, and West Virginia. Sample stores from which sales information was obtained accounted for from 50 percent to nearly all of estimated total retail food store sales in all areas except Detroit where the test sample of stores was drawn to represent only low income-sections of the city.

Combined sales data from all test areas indicated that after the introduction of food coupons, both meat and produce sales increased in about the same proportion as total sales. Sales of products classified as groceries and all other items were 9 percent higher in September-October, 1961 than in April-May, 1961, before coupons were introduced. Dairy products, eggs, and in some instances frozen foods, were among the items included in this group.

An examination of sales data for the individual test areas showed that total food sales both adjusted and unadjusted for seasonal effects were higher after the introduction of food coupons, except in Detroit where unadjusted sales were almost unchanged. Meat sales and sales of groceries and all other items (adjusted) were consistently higher in all areas. On the other hand, produce sales showed a less consistent trend among test areas.

Meat sales, up 7 percent on an adjusted basis, ranged from 2 percent higher in the test area of Minnesota to almost 14 percent higher in Illinois and West Virginia. Produce sales were 6 percent lower in Illinois but about 29 percent higher in Minnesota, and averaged 8 percent higher for all areas. The increase in sales volume for grocery and other items ranged from slightly more than 5 percent in Detroit to more than 12 percent in New Mexico.

From 70 to 80 percent of the sample stores in all test areas showed an increase in sales after introduction of coupons. Sales gains were generally made in stores of all sizes. Small stores reported an average gain of 7 percent compared to 8 percent for large stores after the introduction of food coupons. Medium and very small stores showed considerably larger percentage gains.

The volume of food coupon redemptions reported by sample stores indicated that size of store was not a decisive factor in attracting food coupon business. For all test areas the value of food coupons redeemed by sample food stores averaged 6 percent of total sales and ranged from 5 percent in large stores to 12 percent in small stores.

The effect of changes in general economic conditions in each area was considered. Based primarily on observations but also on interpretation of the limited amount of information available, it appears that there may have been some improvement in economic conditions among the pilot areas. However, improvement that may have occurred is not considered sufficient to have had a decisive influence on retail food sales in the interval between the 2 test periods.

Observation of prices for selected items in sample stores indicated that there was moderate variation among pilot areas and stores within each area during each test period, but no significant overall change or trend between test periods. However, household food consumption surveys showed a slight to moderate decline in prices paid by participants in the Food Stamp Program for food purchased from all sources.

The Stamp Program appeared to have had only a limited influence on advertising and merchandising practices of retail food stores in the pilot areas. While some advertising and in-store promotional material directed to food stamp participants was observed, there was no general change in overall practices as a result of the program.

Supplemental data obtained from observation of purchasing activity of customers in sample stores in Fayette County, Pa., indicated that for each 100 customers observed there were slight increases for some of the selected items observed, but on an overall basis there was relatively little change between test periods in the number of customers purchasing these items. However, in the test period after introduction of food coupons slight to substantial increases were observed in the average quantities purchased by customers buying margarine, eggs, ice cream, meat, bread, flour, cake and pastry mixes, and frozen dinners. The amount spent by each customer observed in sample stores in Fayette County was also considerably higher after introduction of food coupons, averaging \$5.90 per transaction compared with \$4.16 in the test period prior to introduction of the coupons.

Other findings from these observations revealed that customers using food coupons spent considerably more per transaction than customers not using coupons. For the selected items observed the proportion buying and the average quantities taken were generally higher among food coupon customers than noncoupon customers.

Records of food coupon redemptions in sample stores indicate that customers using coupons concentrated their purchases within a short time after coupons were issued rather than spreading their purchases over the time interval between coupon issuing dates. This is believed to account to a great extent for the larger total expenditure per transaction for customers using coupons as compared to all other customers.

EFFECT OF THE PILOT FOOD STAMP PROGRAM ON RETAIL FOOD STORE SALES

By Robert E. Frye, Agricultural Economist, Marketing Economics Division,
Economic Research Service

BACKGROUND AND OBJECTIVES

During a period beginning in late May and continuing into early July 1961, a pilot Food Stamp Program was initiated by the U. S. Department of Agriculture in eight economically depressed areas. The areas are:

City of Detroit, Michigan
Franklin County, Illinois
Floyd County, Kentucky
Virginia-Hibbing-Nashwauk area in Minnesota
San Miguel County, New Mexico
Silver Bow County, Montana
Fayette County, Pennsylvania
McDowell County, West Virginia

Main Provisions of the Program

The Food Stamp Program is administered by the U. S. Department of Agriculture; State welfare and local governmental agencies are responsible for certification of applicants and issuance of coupons. Food coupons are issued to needy families upon application and certification as to eligibility. Participating families having income are required to buy some coupons; they are then issued enough extra ones to permit them to buy a more adequate diet. Families without income are given the coupons. Grocers who are authorized to do so then accept the coupons as money. They can redeem the coupons at commercial banks or use them to pay authorized wholesalers.

The food coupons are about the size of a dollar bill, and come in denominations of \$1 and 25¢. They are bound in books of different values.

The food coupons cannot be spent on cigarettes, liquor, soap, and other nonfood items. Also excluded are packaged imported items and coffee, tea, cocoa, and bananas.

In the test areas the Stamp Plan replaces a program of direct distribution of food to needy families, by which food, acquired by the U. S. Department of Agriculture under market stabilization programs, was donated to States for distribution to eligible families to supplement what they were able to buy. Under the Stamp Program, participants are given increased purchasing power rather than direct donations of food.

Objectives

This report deals with just one phase of the overall research project: it evaluates the Food Stamp Program with regard to its effect on retail food sales and on the retailing industry. Specific objectives of this phase of the study were to determine (1) effect of increased purchasing power made available through food coupons to participants in the Program on total food sales and on sales of specific commodity groups such as produce and meats; (2) changes in proportion of customers purchasing specific items; (3) extent to which total retail food sales were represented by food coupon redemptions; (4) type and size of retail outlet most affected by the Stamp Program, and (5) changes in retail merchandising practices resulting from the Food Stamp Program.

PROCEDURE

In each of the pilot Food Stamp areas a representative sample of grocery stores was selected in which to observe the effect of the Stamp Program on retail food sales. Information as to total sales, sales of produce and meats, and number of customers, was collected from all sample stores on a weekly basis during a 4-week period in April-May 1961, before the food coupons were introduced. Then the same information was recorded for a similar period in September-October after the Program had been in operation for at least a month.

In Detroit, Mich., sales data were obtained from two independently selected samples of stores. One sample of stores was located in low-income areas of the city where impact of the Stamp Program was expected to be greatest. This sample designated "test" was used to determine the impact of the Stamp Program on retail food sales. The other sample of stores was selected from medium to high income areas of the city where participation in the Program was expected to be minimal. This sample designated "control" was used to provide a check on seasonal and economic changes affecting food sales between the two test periods. The test sample of stores in Detroit was not selected to measure the effect of the Food Stamp Program in terms of impact on all stores for the city as a whole, as in the other test areas, but to be representative of low-income areas of the city where the impact of the program on food retailing appeared likely to be greatest.

Data from the separate and independent control sample of stores in medium- and high-income areas of Detroit were used to adjust September-October sales volumes in the low-income test sample of Detroit stores, as well as in all other pilot areas, for variation in sales due to seasonal influence. Unless otherwise indicated all sales relationships referred to in this report are for data so adjusted.

Sample stores, with the exception of Detroit, represented food sales that ranged from a minimum of about 50 percent to almost complete coverage of total retail food sales volume in the pilot areas. In Detroit, the test sample of stores accounted for a relatively small proportion of total sales for the city but for a substantial proportion within the low-income areas of the city.

Data for direct evaluation of the pilot Food Stamp Program were collected from a total of 368 retail food stores (table 1). Based on total unadjusted sales reported during the two 4-week test periods, these sample stores represented an annual volume of business exceeding \$100 million. The control (high-income) sample of stores in Detroit accounted for almost \$37 million in sales annually.

The number of sample stores from which data were obtained ranged from a low of 36 in Floyd County, Ky., to a high of 62 in Detroit. Also there were 62 stores in the Detroit control sample. Sample stores in each area were stratified according to size, and to the extent possible were selected in proportion to the annual volume of business done by each size classification (table 1).

In Fayette County, Pa., in the second and fourth week of each test period, as the customers checked out, the proportion of them buying selected commodities and the quantity they purchased were noted. To the extent possible, these observations were made during the same hours of the day and the same day of the week to insure comparability between test periods. In the September-October test period, these points were observed for both the users and nonusers of the food coupons.

EFFECT OF STAMP PROGRAM ON SALES

Data obtained from representative samples of retail food stores in the 8 pilot areas showed that during a 4-week period in September-October dollar volume of food sales (after adjustment for seasonal variation) averaged 8 percent greater than during a similar period before the coupons were in use (table 2). Sales increases were shown in all pilot areas. Increases in total sales among pilot areas, adjusted for seasonal variation, ranged from a low of 5 percent in test sample stores in Detroit to a high of almost 13 percent in Montana (table 2).

Total sales unadjusted for seasonal variation, averaged about 4 percent higher for test areas other than Detroit where total sales in sample stores were almost unchanged. Unadjusted data showed sales gains for meats in all test areas. Produce sales (unadjusted) showed gains only in sample stores in Minnesota and Montana.

Sales in the control sample of stores in Detroit, where food stamps represented less than 1 percent of total sales volume in the September-October test period, were about 5 percent lower than in the test period (April-May) prior to introduction of food coupons. Meat sales averaged slightly lower but produce sales were down substantially in the control sample of stores (table 3).

In September 1961, a total of \$2.7 million in food coupons were issued under the Program. Participants paid \$1.7 million for these coupons, or 62 percent of the total value issued. The bonus or free coupons totaled \$1.0 million, or 38 percent of the total issuance. In September-October, sales increases in survey stores in the Montana and Minnesota pilot areas were greater than the value of all food coupons redeemed by these stores. In all other areas, increases in total food sales appear to have been greater than

Table 1.--Number of retail food stores in pilot studies on use of food coupons, by size of store,
8 areas, April-May and September-October 1961

Size of store ^{1/}	Detroit		Illi- nois	Kentucky	Minne- sota	Montana	New Mexico	Pennsylv- ania	West Virginia	Total
	Control <u>2/</u>	Test <u>3/</u>								
	Stores	Stores	Stores	Stores	Stores	Stores	Stores	Stores	Stores	Stores
Large.....	19	9	4	0	5	0	1	10	1	49
Fairly large....	6	5	3	1	9	3	3	6	6	42
Medium.....	13	9	15	7	15	5	10	19	24	117
Small.....	14	18	5	6	6	8	9	9	14	89
Very small.....	10	21	16	22	8	18	19	14	5	133
Total stores....	62	62	43	36	43	34	42	58	50	430

1/ Size classification of store by annual volume of business:

Large..... \$1 million and over
 Fairly large..... \$375,000 to \$1 million
 Medium..... \$100,000 to \$375,000
 Small..... \$ 50,000 to \$100,000
 Very small..... Under \$50,000

2/ Control sample of stores drawn from areas of city where participation in plan was expected to be negligible.

3/ Test sample of stores drawn from low-income areas of city.

Table 2.--Sales volume of selected food groups in sample retail food stores in 8 pilot areas before and after food coupons were introduced, 1961 1/

Area	April-May test period before stamps were introduced	September-October test period with stamps in use	Percentage change
	Dollars	Dollars	Percent
Detroit (low-income area):			
Meat.....	483,773	513,889	+6.2
Produce.....	135,378	131,687	-2.7
Groceries.....	1,035,103	1,090,517	+5.4
Total.....	1,654,254	1,736,093	+4.9
Illinois:			
Meat.....	135,978	154,719	+13.8
Produce.....	42,306	39,793	-5.9
Groceries.....	366,300	408,403	+11.5
Total.....	544,584	602,915	+10.7
Kentucky:			
Meat.....	44,569	49,178	+10.3
Produce.....	15,842	17,577	+11.0
Groceries.....	151,984	170,321	+12.1
Total.....	212,395	237,076	+11.6
Minnesota:			
Meat.....	371,221	378,383	+1.9
Produce.....	116,914	150,755	+28.9
Groceries.....	881,614	933,558	+5.9
Total.....	1,369,749	1,462,696	+6.8
Montana:			
Meat.....	238,624	262,770	+10.1
Produce.....	78,548	98,040	+24.8
Groceries.....	598,356	672,198	+12.3
Total.....	915,528	1,033,008	+12.8
New Mexico:			
Meat.....	69,002	71,564	+3.7
Produce.....	28,956	27,793	-4.0
Groceries.....	225,728	254,004	+12.5
Total.....	323,686	353,361	+9.2
Pennsylvania:			
Meat.....	545,894	580,665	+6.4
Produce.....	155,932	153,785	-1.4
Groceries.....	1,271,331	1,392,101	+9.5
Total.....	1,973,157	2,126,551	+7.8
West Virginia:			
Meat.....	202,687	230,929	+13.9
Produce.....	64,099	69,108	+7.8
Groceries.....	582,240	650,942	+11.8
Total.....	849,026	950,979	+12.0
All test areas:			
Meat.....	2,091,747	2,242,098	+7.2
Produce.....	637,976	688,538	+7.9
Groceries.....	5,112,656	5,572,042	+9.0
Total sales.....	7,842,379	8,502,678	+8.4

1/ September-October sales volume adjusted for seasonal variation by control sample of retail food stores in medium- to high income areas of Detroit.

could be attributed to the free or bonus coupons but less than the total value of coupons redeemed by the survey stores.

Table 3.--Percentage change in retail food sales from period before introduction of food coupons to period in which coupons were used, selected pilot areas, 1961 1'

Area	Total	Meat	Produce	Grocery and other
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Detroit:				
Control stores <u>2</u> /.....	-5.2	-1.1	-17.1	-4.9
Test stores, unadjusted..	-0.5	+5.1	-19.4	-0.6
Test stores, adjusted...	+4.9	+6.2	-2.7	+5.4
All other test areas:				
Unadjusted.....	+3.7	+6.3	-8.2	+4.1
Adjusted.....	+9.3	+7.5	+10.8	+9.9

1' 4-week test periods--the first in April-May before coupons were in use, the second in September-October with coupons.

2' Dollar sales in Detroit control stores were used as a basis for adjusting for seasonal variation in the other Detroit test area, as well as in all the other 7 test areas. The Detroit control sample of stores was drawn from areas where participation in the Program was expected to be negligible.

The number of families or persons participating in the pilot Food Stamp Program was reported to be considerably lower in all pilot areas than in the previously operated direct distribution program. It is likely that some of the former participants in the Direct Distribution Program, who were not participants in the Food Stamp Program, purchased more food in retail food stores, and thus replaced at least a portion of that they formerly received through direct distribution. Although the extent of such purchases was not determined, it may have been a factor in influencing increased food sales and contributing to the total sales increase reported in each pilot area.

Meat sales reported by sample stores in all areas averaged 7 percent greater during September-October than in April-May. Pilot areas of Illinois and West Virginia--with a 14 percent increase--showed the greatest expansion in meat sales. Sales gains in other areas were more moderate ranging from about 4 percent in New Mexico to 10 percent in Kentucky (table 2).

Produce sales in the pilot areas kept pace with total sales, averaging 8 percent higher after food coupon introduction. However, among areas there was considerable variation in produce sales. Sales in the Minnesota area were almost 29 percent greater than sales prior to the Stamp Program. But in Franklin County, Ill., sales were down almost 6 percent. Sample stores in

only 4 of the 8 pilot areas showed an increased volume of produce sales. Variability in produce sales among areas cannot be specifically or completely accounted for in this analysis. However, it appears that differences in availability of home grown produce, prevalence of roadside stands, and extent of door-to-door selling may have had significant but variable effects on purchases through retail food stores.

The seasonal adjustment made could not take into account this inter-area difference and, in fact, use of constant adjustment factors in certain instances may have magnified the actual variation. Concurrent household consumption surveys in two of the pilot areas showed significant increases in the volume of fresh fruit and vegetables consumed. ^{1/} In rural Fayette County, Pa., the value of fresh vegetables consumed by families participating in the Stamp Program rose 67 percent on a per capita basis. Fresh fruit consumption was up 73 percent. Equally impressive gains were reported for Stamp Program participants in Detroit. These findings further support the likelihood that in September-October many consumers were getting produce from some other source than retail food stores.

In all pilot areas, sales of items in the "grocery and other" classification were up significantly during September-October compared with April-May. The increases ranged from over 5 percent to around 12 percent. The 9 percent increase in sales for items in this classification was greater than that for either total sales, meat, or produce sales (table 2). In most instances, this classification accounted for over 50 percent of total sales volume reported by sample stores. Since dairy, and in some instances, frozen foods were among the items contributing to total sales in this classification, the magnitude of this gain was not surprising. In Pennsylvania, several dairy department items were purchased by a greater proportion of shoppers and in larger quantities in September-October than in April-May.

That the Food Stamp Program resulted in increased retail sales of food is supported by findings of the household food consumption surveys made in two of the pilot areas, Detroit, Mich., and Fayette County, Pa. On a per capita basis, the value of food purchased in a week by families participating in the Food Stamp Program was up 52 percent in Detroit and 28 percent in rural Fayette County. The increase in the value of all food used, including home-produced, received as gifts or pay, etc., was of a lesser magnitude--34 percent in Detroit and 9 percent in rural Fayette County.

RETAIL MERCHANDISING PRACTICES

While the volume of business represented by food coupon customers was a relatively small part of total sales in all test areas and in most sample stores, its potential contribution to sales was quickly recognized by food retailers.

A limited amount of newspaper advertising directed to Stamp Program participants was observed in several of the test areas. Also advertising

^{1/} Reese, R. B., and Adelson, S. F. Food Consumption and Dietary Levels under the Pilot Food Stamp Program. Agr. Econ. Rpt. No. , U. S. Dept. Agr. (in press)

material directed to customers using coupons was displayed in the windows and at the point-of-purchase in a number of sample stores. In the New Mexico test area food retailers and wholesalers cooperatively financed the publication of educational material which was made available to individuals as they received their allotment of food coupons. This material primarily pointed out best buys and gave ideas on menu planning and nutritional requirements and values, to assist participants in making the most effective use of their increased purchasing power.

Retailers did not generally take any extensive and direct promotional action to attract participants to the Stamp Program. Rather, retailers appeared to take the position that food coupon customers could be best attracted by treating them as regular customers. Some of the smaller retailers who knew their customers personally encouraged eligible ones to apply for food coupons.

Prices for many items were observed in sample stores during the 2 test periods. While in some instances considerable variation in prices of identical items was found, there appeared to have been no significant trend or change in retail prices between the 2 test periods.

IMPACT BY SIZE OF STORE

Increased sales were recorded by a sizable majority of stores in all test areas after the Food Stamp Program went into operation. In the test area of Detroit, sales increases were found for about 70 percent of sample stores--the smallest proportion of stores in any of the 8 test areas. The proportion of stores experiencing sales gains was highest in West Virginia and Minnesota where about 80 percent of the sample stores reported increased sales.

Combined total sales in each size classification of sample stores from all test areas averaged higher during September-October than in April-May (table 4). Size classification of stores by volume of business is given in table 1, footnote 1, page 4. Also, in each of the 8 test areas, sales were up for each store size group except for medium size stores in Detroit, where sales were down slightly.

Sales gains were made by small stores in each of the 8 areas. The percentage increase ranged from 1.3 percent in Montana to almost 21 percent in Kentucky. The average sales gain of 6 percent for all small stores was slightly lower than for any other store size group. But large stores with a 7 percent larger sales volume had a smaller percentage of increase in sales than any size group except small stores. Medium and very small stores showed the largest gains--11 and 13 percent respectively--over the April-May period.

Sales data obtained from sample stores were not analyzed to appraise the impact of the Food Stamp Program on sales volume by type of store management. However, since most chain food outlets are of the supermarket size and would fall in the large and fairly large store classification, sales gains found for stores in these classifications would closely approximate the impact of the Stamp Program on chain outlets.

Table 4.--Percentage change in total sales from period before introduction of food coupons to period in which food coupons were used, sample retail food stores in 8 pilot areas, by size of store, 1961 1/

Area	Large	Fairly large	Medium	Small	Very small
	Percent	Percent	Percent	Percent	Percent
Detroit (low-income test area).....	+5.2	+6.7	+2.2	+2.8	+10.9
Illinois.....	<u>2/</u>	+6.1	+16.1	+4.8	+16.2
Kentucky.....	---	<u>2/</u>	+5.5	+20.7	+20.7
Minnesota.....	+4.8	+8.7	+6.9	+4.8	+17.6
Montana.....	<u>2/</u>	+15.1	+7.7	+1.3	+16.3
New Mexico.....	---	+5.6	+13.5	+12.6	+13.7
Pennsylvania....	+6.1	+8.7	+15.4	+6.7	+12.2
West Virginia....	<u>2/</u>	+13.7	+11.9	+3.8	+21.9
All areas <u>3/</u>	+7.1	+8.9	+10.5	+6.4	+15.4

1/ 4-week test periods in April-May and September-October 1961. Total dollar sales adjusted for seasonal variation by control sample of retail food stores in Detroit. For size classification of stores, see table 1, footnote 1.

2/ Combined with next smaller size stores to avoid identification.

3/ Average weighted by sales in each area.

For all test areas, the value of food coupons redeemed by sample stores represented 6 percent of total sales volume during September-October 1961. Among the test areas the contribution of food coupons ranged from 2 percent of total sales in Montana to 12 percent in the low-income test area of Detroit.

As a percentage of combined total sales for sample stores in all areas, the value of food coupons redeemed varied inversely with size of store and ranged from a low of 5 percent of total sales in large stores to a high of 12 percent in very small stores. For individual test areas, however, there was some variation from this relationship of size of store and proportion of total sales represented by food coupons. In West Virginia, for example, the proportion of total sales represented by food coupons was fairly uniform for all size stores, ranging from 10 to 12 percent (table 5).

The fact that sales gains were generally shared by all sizes of retail food stores and that the volume of food coupons redeemed as a proportion of total sales generally favored smaller stores was contrary to the expectations of many retail food store operators before the Stamp Program became operative. The operators of stores offering credit, the majority of which fell in the medium to very small size classification, felt that the Stamp Program with the requirement that food coupons could not be used to pay back debts would encourage some of their regular customers to patronize other stores. 2/

2/ This statement is based on interviews with individual store operators during April-May before the Stamp Program was initiated.

Table 5.--Food coupon redemptions as percentage of total dollar sales,
by sample retail food stores in 8 pilot areas, by size of store,
September-October 1961 ^{1/}

Area	Large	Fairly large	Medium	Small	Very small	All sizes
	Percent	Percent	Percent	Percent	Percent	Percent
Detroit.....	11	12	16	12	12	12
Illinois.....	<u>2</u> ^{1/}	8	8	10	23	9
Kentucky.....	0	<u>2</u> ^{1/}	7	10	14	9
Minnesota.....	3	3	3	5	6	3
Montana.....	<u>2</u> ^{1/}	2	2	6	6	2
New Mexico.....	0	6	15	22	14	11
Pennsylvania....	8	7	7	7	18	8
West Virginia...	<u>2</u> ^{1/}	10	12	11	11	11
All areas.....	5	6	7	9	12	6

^{1/} For size classification of stores, see table 1, footnote 1, page 4.

^{2/} Combined with next smaller size stores to avoid identification.

While the sales data obtained from sample stores do not permit an examination of shifts in store patronage, the general increase in sales shared by most sample stores indicates that this was at a minimum.

OBSERVATIONS MADE OF CUSTOMERS

Analyses of information obtained from observing customers in sample stores in Fayette County, Pa., were carried out to determine changes between test periods in proportion of customers buying selected items and the average quantity purchased by those buying. ^{3/} These analyses were based on approximately 3,400 observations of individual customer transactions in the April-May test period and around 4,400 in the September-October period, of which 265 were coupon users. The difference in number of customer transactions was due to a larger number of customers patronizing sample stores during September-October, as observations were made in each sample store during comparable periods of time in both test periods (see Procedure, page 2). All pertinent comparison between test periods, however, are based on each 100 customers observed or expressed as a percentage to eliminate differences due to change in total number of customers observed.

Observations covered normal customer traffic at the checkout counter in sample stores during selected periods of time during both test periods. In September-October both participants and nonparticipants in the Food Stamp Program were observed to the extent that each group was represented in normal store traffic. Purchase data obtained from these observations offer comparative measures of the proportion of customers buying and the average quantity purchased by those buying specific items in the 2 test periods. The purchase data

^{3/} Similar observations were made in a subsample of stores in Detroit, but not in sufficient number to be useful.

obtained by observation are not a measure of total food consumption of either participants or nonparticipants in the Food Stamp Program.

The information collected, as to proportion of customers purchasing selected products and the average quantity purchased by those buying is shown in table 6. The quantity of an individual product purchased by the customer was recorded in standard measures of pounds, dozens, ounces or quarts where applicable and possible. However, the quantity purchased for products such as meat, bread, cake mixes and produce could not be easily and accurately recorded in standard measures. For products such as bread, cake and pastry mixes, and frozen dinners where the package or consumer unit is reasonably standardized, the number of items selected is believed to be a valid measure of change in quantity purchased between the two test periods. However, for meats and produce the number of items purchased, while a strong indicator of comparative quantity, is a more precise indicator of change in variety.

Table 6.--Number of purchasers of selected items and average quantity bought in sample retail food stores in Fayette County, Pa., during tests on effect of food coupons, 1961

Commodity	Purchasers per 100		Average quantity purchased by		
	customers observed		customer buying		
	April-May	Sept.-Oct.	Unit	April-May	Sept.-Oct.
	<u>Purchasers</u>	<u>Purchasers</u>		<u>Equivalent units</u>	<u>Equivalent units</u>
Milk, fresh.....	24.4	25.5	Quart	2.1	2.0
Nonfat dry milk....	0.6	0.6	Quart	8.2	8.2
Butter.....	6.1	8.0	Pound	1.1	1.1
Margarine.....	12.0	11.1	Pound	2.3	2.4
Eggs, fresh.....	9.4	10.7	Dozen	1.5	1.6
Ice cream.....	5.4	6.1	Quart	1.9	2.1
Meat.....	52.5	49.3	Item	2.9	3.0
Bread.....	37.3	34.4	Loaf	1.6	1.8
Flour.....	4.9	4.8	Pound	10.5	12.8
Cake or pastry mix..	7.4	9.3	Boxes	1.8	2.1
Frozen dinners.....	2.0	2.6	Number	2.7	3.8
Frozen juice.....	2.7	2.6	6-ounce can	3.4	3.1
Soft drinks.....	6.6	5.6	6 pack	1.3	1.3
Produce.....	40.6	35.8	Item	2.5	2.2
Cigarettes.....	21.2	20.7	Pack	4.8	4.5

The average amount spent by each customer observed was considerably higher after introduction of food coupons, \$5.90 in September-October and \$4.16 in April-May. These averages reflected the total amount spent by each consumer for all items selected in the store and included in the checkout. Therefore, expenditures for items other than those for which specific information was obtained are reflected in average expenditures per customer transaction.

For each 100 customers observed there was relatively little overall change between the 2 test periods in the number of customers purchasing the selected items shown in table 6. The number of customers buying fresh milk, butter, shell eggs, ice cream, cake and pastry mixes, and frozen dinners was slightly higher in September-October than in April-May. But for all other items there were slightly fewer customers buying for each 100 observed.

Compared with April-May, slight to substantial increases in the average quantities purchased were observed for customers buying margarine, eggs, ice cream, meat, bread, flour, cake and pastry mixes, and frozen dinners. For produce (number of items), frozen juices, and milk, the average quantity purchased was lower. For all other items observed, the average quantity purchased by those buying was unchanged between test periods.

Although customers buying fresh milk purchased a slightly smaller average quantity than in April-May, this was offset by a slight increase in proportion of customers buying milk. In the September-October period, dairies in this test area also accepted food coupons in payment for home delivered milk. This may have been a factor that limited increased purchases in retail food stores.

Customers buying butter purchased the same average quantity in both test periods but the proportion of customers buying was moderately higher in September-October 1961. For ice cream and cake and pastry mixes, both the proportion of customers buying and the average quantity purchased per customer buying was higher than in April-May.

Although there was a slight increase in both proportion of customers buying fresh eggs and the average quantity purchased by those buying in the test period after introduction of food coupons, household consumption data showed that participants in the Stamp Program from the rural areas of Fayette County, Pa., used considerably less eggs (dried and shell combined), in terms of both quantity and value. (See reference to household study, footnote 1, page 7.) However, preliminary analysis of the household consumption data shows that Stamp Program participants increased their consumption of shell eggs to offset the loss of dried eggs previously received through direct donation.

For customers observed during September-October, when the Food Stamp Program was in operation, those using food stamp coupons spent an average of \$9.25 per transaction in comparison with \$5.70 by nonstamp customers. Again these average expenditures per customer transaction reflected the total amount spent for all purchases by a customer including ineligible foods and nonfoods that may have been purchased by coupon customers with additional cash outlays.

For the items observed, the proportion of food-coupon-using customers that bought was greater than of customers not using coupons, except for frozen dinners, frozen juices, produce items, and cigarettes (table 7). The average quantity purchased was also slightly larger for coupon customers than for non-coupon customers for most of the stores observed.

The higher proportion of coupon users that purchased most of the items observed and the larger amount spent by the food coupon customer does not

indicate that these customers had greater purchasing power than regular customers. Rather it is more likely a reflection of the shopping behavior of participants in the Food Stamp Program: their tendency to use food coupons within a relatively short time after they are received. The dollar volume of coupon redemptions reported by sample stores in all areas was highly correlated with the dates the coupons were issued. That is, the majority of the coupons were redeemed during the week of issue or the week after. Thus, it appeared that food coupon users purchased at one time their major food needs for the interval between coupon issuing dates, rather than spacing their purchases over this period. This practice appears to have been the principle reason that food coupon customers spent significantly more per transaction than regular customers.

Table 7.--Number of food coupon customers and regular customers purchasing selected items, and quantity bought per purchaser, in sample retail food stores, Fayette County, Pa., September-October 1961

Commodity	Purchasers per 100		Average quantity bought per		
	customers observed		purchaser		
	With	Without	Unit	With	Without
	coupons	coupons		coupons	coupons
	<u>Purchasers</u>	<u>Purchasers</u>		<u>Equivalent units</u>	<u>Equivalent units</u>
Milk, fresh.....:	27.0	25.4	Quart	2.9	2.0
Nonfat dry milk.....:	0.8	0.6	Quart	9.7	5.7
Butter.....:	8.7	7.9	Pound	1.4	1.1
Margarine.....:	21.8	10.4	Pound	4.0	2.2
Eggs, fresh.....:	19.0	10.2	Dozen	2.8	1.5
Ice cream.....:	8.7	5.9	Quart	3.0	2.1
Meat.....:	59.9	48.6	Item	4.2	2.9
Bread.....:	43.7	33.9	Loaf	2.4	1.7
Flour.....:	10.3	4.5	Pound	17.0	12.2
Cake or pastry mix...:	10.7	9.2	6 ounces	2.5	2.1
Frozen dinners.....:	2.0	2.6	Item	3.8	3.8
Soft drinks.....:	6.3	5.5	6-pack	1.2	5.2
Produce.....:	40.0	35.8	Item	2.9	2.2
Cigarettes.....:	7.5	21.5	Pack	2.8	4.6